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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,421	09/08/2003	Jordan Cohen	112855.122 ( US2)	9023
23483 7590 03/21/2007 WILMER CUTLER PICKERING HALE AND DORR LLP 60 STATE STREET BOSTON, MA 02109			EXAMINER SHAH, PARAS D	
			ART UNIT	PAPER NUMBER
			2609	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		03/21/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/21/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

10/657,421

Applicant(s)

COHEN ET AL.

Examiner

Paras Shah

Art Unit

2609

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09/08/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 and 6-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>08/05/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This communication is in response to the Application filed on 09/08/2003.

#### ***Specification***

2. The disclosure is objected to because of the following informalities: "extractsboth" on page 4, paragraph 4, line 2).

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-3, 6-7, 9-10, and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lumelsky (US 6,081,780, issued on 06/27/2000) in view of Meredith (US 5,796,916, issued on 08/18/1998).

As to claims 1,9, and 13, Lumelsky discloses a method and system for speech synthesis comprising: receiving a spoken utterance (see Abstract and Figure 2A element 107) (e.g. The latter reference represents the input microphone); extracting one or more prosodic parameters (see col. 8, lines 64-67 and col. 9 lines 1-4, and col. 17, lines 25-31) (e.g. The latter reference is provided for the signal processor that analyzes the speech signal) from the spoken utterance; decoding the spoken utterance to provide a recognized word (see col. 20, lines 37-40); synthesizing a nominal word (e.g. The applicant refers to the nominal word as synonymous to synthesized word) corresponding to the recognized word (see col. 13, lines 42-43); and generating a prosodic mimic word using (see col. 16, lines 62-65) the nominal word (see. col. 16, line 46) (e.g. It is inherent that speech consists of words) and the one or more prosodic parameters (see col. 16, lines 45-50). Further, Lumelsky discloses the use of software codes being executed by a processor for the steps described above (see col. 17, lines 17-25). However, Lumelsky does not specifically disclose the alignment of the spoken utterance and the synthesized word. Meredith does disclose the alignment of the spoken utterance to the synthesized speech (see Abstract). It would have been obvious to one of ordinary skilled in the to art at the time the invention was made to have combined the speech synthesis for an utterance as presented by Lumelsky by the alignment of the utterance and the synthesized word presented by Meredith. The motivation to have combined the two references include the improvement in intonation (see col. 3, lines 5-10).

As to claim 2, Lumelsky discloses wherein the one or more prosodic parameters include pitch (see col. 13, line 62).

As to claim 3, Lumelsky discloses wherein the one or more prosodic parameters include timing (see col. 13, line 63) (e.g. It is inherent that duration includes timing).

As to claim 6, Meredith discloses comprising temporally (see col. 4, lines col. 4, lines 37-53) (e.g. The reference indicates the use of intervals and a pitch point marking) aligning phones (see col. 3, line 5) (e.g. Phones are synonymous to phonetic symbols) of the spoken utterance and phones of the nominal word (see Abstract).

As to claim 7, Lumelsky discloses comprising converting the prosodic mimic word into a corresponding audio signal (see col. 13, line 28) (e.g. It is inherent that the signal is in audio since the synthetic version is played back in the headset).

As to claim 10, Lumelsky discloses wherein the decoder comprises a speech recognition engine (see col. 20, line 38-39).

As to claim 12, Lumelsky discloses comprising a storage device (see col. 17, line 22) including executable instructions (see col. 17, line 21) for speech analysis and processing (see col. 17, lines 17-20).

6. Claims 4, 8, 11, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lumelsky and Meredith as applied to claims 1, 9, and 13 above, and further in view of Cameron (WO 02/097590 A, published on 12/05/2002).

As to claim 4, Lumelsky and Meredith do not specifically disclose wherein the one or more prosodic parameters include energy. Cameron does disclose the one or more prosodic parameters (see page 29, line 2) include intensity (see page 29, line 2)

(e.g. It is implied that energy is being considered since intensity is the energy density). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the methods and system presented by Lumelsky and Meredith with the addition of a prosodic parameter, intensity, presented by Cameron. The motivation to have combined the references include the increase in quality of the synthesized speech from the actual speech recorded (see page 29, line 3-5).

As to claims 8, 11, and 14, Lumelsky and Meredith do not specifically disclose the spoken utterance received by a telephone input device and the prosodic mimic word provided to a telephone output device. However, Cameron discloses the use of a portable telephone (see page 5, paragraph 5, line 4) input device (see page 5, paragraph 6, line 1) and the prosodic mimic word (synthesis and presentation of commands to the user) (see Abstract and page 18, paragraph 2, lines 1-8) is provided to a telephone output device (see page 5, paragraph 6, line 2). Further, Cameron discloses the use of a user interface (see Abstract) utilizing a mobile phone (see page 18, line 7 and page 5, paragraph 5, line 4) (e.g. It is inherent that a portable telephone encompasses a mobile telephone). It would have been obvious to one of ordinary skilled in the art at the time the invention was made to have combined the methods and system presented by Lumelsky and Meredith with the speech synthesis applied to a telephone. The motivation to have combined the references involves the suggestion by Lumelsky on a cellular telephony (see col. 21, line 26). Further, the implementation of speech synthesis methods on a mobile phone allows voice dialing and voice command recognition (see Cameron, page 2, paragraph 2).

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sharman (US 5,682,501) is cited to teach a speech synthesis that outputs an audio signal according to the prosodic parameter. Abe (US 5,940,797) is cited to teach a method of synthesizing speech from actual speech using prosodic parameters. Sharma *et al.* (US PGPub 2004/0056907) is cited to teach prosody based audio and visual recognition.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paras Shah whose telephone number is (571)270-1650. The examiner can normally be reached on MON.-FRI. 7:30a.m.-5:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571)272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2609

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.S.

02/21/2007



XIAO WU  
SUPERVISORY PATENT EXAMINER